

Abstract/Résumé analytique

“A Time and Times and the Dividing of Time”: Isaac Newton, the Apocalypse and 2060 A.D.

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On 22 February 2003 a story on the front-page of the Daily Telegraph announced that Isaac Newton had predicted that the world would end in 2060 A.D. That such an icon of rationality as the “scientist” Sir Isaac Newton, a thinker credited with founding modern mathematical physics, would venture into apocalyptic thought struck the media as both bizarrely anomalous and eminently newsworthy. During the week subsequent to the Daily Telegraph revelation, the story spread around the world in the print, radio, television and Internet media. This paper provides crucial historical background detail on the story that was left out of these sensationalized reports. First, this paper considers the several likely reasons why this story generated so much interest. Second, it is argued that apocalyptic thought is a culturally- and intellectually-widespread phenomenon, affecting even modern science itself. Third, an account is given of Newton's prophetic scheme, which not only reveals the logic of his apocalyptic chronology and the biblical hermeneutics he deployed, but also demonstrates that Newton was against date-setting and did not in fact believe the world was going to end in 2060 A.D.

French

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“A TIME AND TIMES AND THE DIVIDING OF TIME”: ISAAC NEWTON, THE APOCALYPSE AND 2060 A.D.

And one said to the man clothed in linen, which was upon the waters of the river, 'How long shall it be to the end of these wonders?' And I heard the man clothed in linen, which was upon the waters of the river, when he held up his right hand and his left hand unto heaven, and swore by him that liveth for ever that it shall be for a time, times, and an half.

Daniel 12:6-7

I. Isaac Newton and *Apocalypse Now*

Near the end of his long life, Isaac Newton reached for a scrap of paper and scrawled down the date 2060 A.D. as the possible year in which the most dramatic events of the Apocalypse would begin to take place. When he did this, it is safe to assume that he never thought this private prophetic musing would be revealed to the public, let alone that in 2003 A.D. millions around the world would learn about this date as his definitive prediction for the end of the world. Yet, this seemingly improbable turn of events did transpire in late February and early March 2003, when a newspaper story and a BBC 2 documentary brought to public attention the putatively paradoxical knowledge that Newton was more than a scientist. The purpose of this paper is twofold. First, I will reflect on the early 2003 media portrayal of Newton as doomsday prophet and what this says about public conceptions of the author of the *Principia mathematica*. Second, I will venture beyond the sound bytes, distortions, misunderstandings and misrepresentations that are a normal development of this sort of media event to explicate the nuances of details of the biblical faith, prophetic culture, and apocalyptic chronologies within which Newton's "prediction" about 2060 appears a lot less paradoxical.¹

Due to my involvement as one of the historical consultants for the BBC 2 documentary *Newton: the Dark Heretic*, I was asked to make myself available to the media about ten days before the scheduled airing of the documentary on 1 March 2003.² I suppose it is possible that the media-savvy people with the British

¹ My interest in early modern prophetic interpretation was stirred in part by my encounter, as an undergraduate, with Paul Christianson's seminal *Reformers and Babylon*. It was my study of the apocalyptic thought of early modern natural philosophers such as Isaac Newton, that led me into History of Science through the back door, as it were. It was thus a very great pleasure to take part in a conference commemorating Professor Christianson's retirement and honouring his great contributions to scholarship. I am also grateful to the participants of the conference for their helpful comments and insights.

² The documentary *Newton: the Dark Heretic* was produced for the BBC by Blakeway Productions. The producer was Malcolm Neaum and the director Chris Oxley.

Broadcasting Corporation had a sense of what this could amount to; I certainly did not. On 21 February I was interviewed by the religion correspondent from the London *Daily Telegraph* regarding Newton's predictions about the date 2060 A.D. This prediction features at the end of the documentary when I am shown at the Jewish National and University Library in Jerusalem handling and commenting on the manuscript bearing the 2060 date. The reporter told me after the interview that he was not certain if the article would be published. It was my expectation that if it was, it would be buried deep in section D or E. In the event, it appeared on the front page the very next day. Someone at the *Daily Telegraph* saw a story in this.

Here, for the record, is the story in its entirety:

Newton set 2060 for end of world

BY JONATHAN PETRE RELIGION CORRESPONDENT Sir Isaac Newton, Britain's greatest scientist, predicted the date of the end of the world — and it is only 57 years away.

His theories about Armageddon have been unearthed by academics from little known handwritten manuscripts in a library in Jerusalem.

The thousands of pages show Newton's attempts to decode the Bible, which he believed contained God's secret laws for the universe.

Newton, who was also a theologian and alchemist, predicted that the Second Coming of Christ would follow plagues and war and would precede a 1,000-year reign by the saints on earth — of which he would be one.

The most definitive date he set for the apocalypse, which he scribbled on a scrap of paper, was 2060.

Newton's fascination with the end of the world, which has been researched by a Canadian academic, Stephen Snobelen, is to be explored in a documentary, *Newton: the Dark Heretic*, on BBC2 next Saturday.

"What has been coming out over the past 10 years is what an apocalyptic thinker Newton was," Malcolm Neaum, the producer, said.

"He spent something like 50 years and wrote 4,500 pages trying to predict when the end of the world was coming. But until now it was not known that he ever wrote down a final figure. He was very reluctant to do so."

Thousands of Newton's papers, which had lain in a trunk in the house of the Earl of Portsmouth for 250 years, were sold by Sotheby's in the late 1930s.

John Maynard Keynes, the economist, bought many of the texts on alchemy and theology. But much of the material went to an eccentric collector, Abraham Yahuda, and was stored in the Hebrew National Library. It was among these documents that the date was found.³

The BBC certainly got their free publicity.

But this is only the beginning of the story. On the same day, the *Telegraph* piece began to be picked up on Internet news sites. The next day two Hebrew

language newspapers in Israel, *Maariv* and *Yediot Aharonot*, ran adapted versions of the story on their front pages. The headline in *Maariv* read: "The end of the world in 57 years!"⁴ Israelis were doubly interested in the story, as the manuscript containing the 2060 date is held along with the rest of the Yahuda collection at the Jewish National and University Library in Jerusalem. Sunday 23 February also saw for me the beginning of a five-day wave of interviews with the local, Canadian, and international newspaper, radio, and television media. On Monday 24 February, the story made the front pages of a series of Canadian newspapers, including the *National Post*. From this point, the story proliferated rapidly around the world, fanning out most quickly on the internet. Typing the terms "Isaac Newton 2060" into the search engine Google quickly revealed the full extent of this proliferation. Web coverage of the story existed in all the major European languages, including German, French, Hungarian, Romanian, and Russian; it was even covered by the Slovakian *Pravda*. News of Newton's prediction was also reported on internet news sites in South America, South Africa, India, China, Japan, and Vietnam. A colleague in Belgium told me that the story featured in the free newspapers handed out to subway travellers. The story was even reported in the sober British science journal *Nature*, which asserted that Newton predicted that "science, along with everything else, will stop when the world ends in 2060."⁵

Clearly, both the media and the public were surprised by the revelation that Isaac Newton was an apocalyptic thinker. In the minds of many, it was something of a scandal. For a great number in both the academic world and in the public, apocalyptic thought is directly antithetical to the supposed sober and rational methodology of science. It was, above all, an embarrassment for science: the father of modern physics was an apocalyptic thinker. It was as if someone had discovered that Albert Einstein had attended seances — and had taken them seriously. Reporters repeatedly asked me how it could be that a great, rationalist scientist like Newton could have taken biblical prophecy seriously. Incredulity knew no bounds. While some news services relayed the story in a sober fashion, others refused to take it seriously, with one website running the story with a photograph of a mushroom cloud above the caption: "Party like it's 2060." *Yahoo! News* in the UK and Ireland used an image of an asteroid striking the earth and the headline "The end of the world is nigh." After my 24 February 2003 interview on the Halifax CBC radio show *Mainstreet*, the engineer played the R.E.M. song "It's the end of the world as we know (and I feel fine)," albeit in the version recorded by the Atlantic Canadian band *Great Big Sea*. The effect of these whimsical takes on the story was to create distance between irrational apocalyptic thought and the superior rationality of those behind the news media. This, they were saying, is not *us*.

Realizing that this was a rare opportunity for an academic to reach a wider audience, but also being concerned that the story had taken on a life of its own in a simplified and increasingly trivial way, I attempted to add nuances, qualifications, and content during interviews that included CBC Radio, Global TV, CBC Newsworld, the *Daily Mail*, the Canadian *National Post*, Agence France Presse, a Toronto sports radio station, a Chicago radio talk show, the *Moscow News*, and the

⁴ I am grateful to my Israeli colleague Ayval Le-Shem for providing me with copies of these front-pages stories, as well as their English translations.

⁵ *Nature*, 421 (27 February 2003), 882.

Russian language programme on Radio Free Europe.⁶ In the limited time usually allotted to me, I tried to show that Newton was not predicting the destruction of the world in 2060, that he was not strictly speaking a date-setter, that prophetic interpretation was a high intellectual endeavour in the seventeenth and early eighteenth centuries, that there were linkages between Newton's study of God and his study of Nature, and that he was not in any case a scientist in the modern sense. Nevertheless, for most the message that endured was that the great "scientist" Newton had predicted the end of the world.

II. The Problem of Newton's Prophecy, or, Why Did the 2060 Story Take Off?

In retrospect, it is easy to see why the editors of *The Daily Telegraph* chose to run the story on the front page. It is a great story. Both the headline and the article begin with Newton's name, and it goes without saying that Newton is one of the best-known figures in history, let alone science. And, as both the headline and the first sentence of the article proclaim, this internationally-recognized scientist predicted nothing less than "the end of the world." The sense of drama is heightened by the reminder, at the close of the first sentence, that Newton's date comes within our century. History has caught up with Newton's eighteenth-century prediction. In addition to Newton, the article refers to John Maynard Keynes, a leading figure in twentieth-century British political and economic history; in other words, another individual with high name-recognition value. The colourful cast of this drama also includes an English Earl, an "eccentric" Jewish manuscript collector, a BBC producer, and "a Canadian academic." A sense of revelation pervades the newspaper report. The article reveals that one of the most influential figures in the history of science was both a theologian and an alchemist. Because theology and alchemy are, in the minds of many, directly antithetical to the "rational" pursuit of science, the report also sets up a delightful paradox. This revelatory feel is combined with a cloak-and-dagger sub-theme given in the image of the dusty, centuries-old trunk in the house of a nobleman finally yielding its marvelous mysteries. These secrets, the article hints, were being teased out of a reluctant Newton. The article also resonates with several matters relevant to popular religious consciousness: the Bible code, Armageddon, the apocalypse, and a date for the end of time. What is more, a sense of the exotic is reinforced not only through the naming of the aforementioned illustrious cast, but also in the mention of the prestigious Sotheby's auction house and the location of the 2060 manuscript at the Hebrew University Library in the city of Jerusalem — a city of tremendous historical, religious, and contemporary political significance. And, given that many of the events associated with the biblical apocalypse centre on Jerusalem, there is a sense of appropriateness in this location. In short, Jonathan Petre's article is a brilliant piece of journalism.

But the article is also embedded with some unresolved tensions. In part, these tensions are created by the truncation of the data. The most dramatic truncation

⁶ Richard Foot's article in the 3 March 2003 *National Post* was one of the most reflective accounts to be published.

comes in the headline, for which the *Daily Telegraph* correspondent may not have been responsible. The seven short verbal units “Newton set 2060 for end of world,” along with the declaration of the first sentence, when taken literally, imply that Newton was predicting the complete destruction of the planet we call home. This message is at odds with the details of the fourth sentence, which I insisted Mr Petre include in order to provide some positive content. As I will stress below, what Newton had in mind for 2060 A.D. was not the *end* of the physical world but a new *beginning* for the world (physical and human). A second tension is seen in the headlining of Newton’s prediction of 2060 and the testimony of Malcolm Neaum that makes it plain that Newton was reticent to set dates. But this was lost in the subsequent media storm.

Now that this media storm has largely slipped into history, it is easier to stand back and reflect on what it tells us about the public perceptions of Sir Isaac Newton. First, there was genuine surprise at the juxtaposition of Newton’s name with an apocalyptic prediction. For many this juxtaposition is counter-intuitive and difficult to grasp. Most people think of Newton as a “scientist” and nothing more. But this is partly because few people in the public or the media have an understanding of what an intellectual cross-road the early modern period was. In fact, we now know that Newton was in many ways a Renaissance man, working in theology, prophecy, and alchemy, as well as mathematics, optics, and physics. But the surprise was also the result of a popular reflex that disassociates religion from science — a reflex nourished and perpetuated in large part by the media itself. As for those who wanted to take Newton’s prediction seriously, perhaps there was a sense among some that the man who revealed the workings of the world might also have some insight into its end.

It is also the case that the 2060 story broke at a particularly apocalyptic time for the world. It was striking how the television images of the interviews on Global TV and CBC Newsworld came in a mix of images that included dramatic footage of US troops and helicopters arriving in Kuwait for the impending US and British-led invasion of Iraq. In a TV interview shot in Israel, the JNUL archivist astutely suggested that the looming war in Iraq was helping to feed interest in the story about Newton’s apocalyptic prediction. It was thus ironic that Newton’s date was released at a time of international crisis centring on the nation now inhabiting the territory of ancient Babylon, which features so prominently in the Old and New Testament prophecies that Newton knew so well. Newton’s prediction became entangled in real history unfolding in early 2003. But the war in Iraq was not the only worrying development on the minds many people. Shortly before the story broke, both India and Pakistan test-fired nuclear-capable missiles. North Korea had for several months been rattling its nuclear sabres. And, of course, we live in an age when airplanes fly into buildings fully laden with kerosene and cargoes of human flesh. The apocalypse is not only associated with wars, but also plagues, and thus it is curious that the global epidemic of SARS appeared at roughly the same time the second Gulf War began. In the context of these times of jittery nerves, it is perhaps not surprising that the 2060 story resonated so well with the public.

III. The Apocalypse Mentality: Religious and Secular

But Apocalypticism as a phenomenon is more widespread than the religious versions thereof. Biblical apocalyptic thought focuses on temporary social disintegration and moral chaos, which is in turn mirrored in the devastation of nature. Today one can note the phenomenon of eco-apocalypses, which focuses on such natural disasters as ozone depletion, the rapid deforestation of the Amazon jungle and, in the first Gulf War, the burning oil wells Kuwait. Hollywood has capitalized on worries about the potential devastation caused by NEOs striking the earth, as seen in the recent films *Armageddon* and *Deep Impact*. There are also plagues in abundance. Sub-Saharan Africa is being decimated by the modern-day plague of AIDs. HIV infection rates are escalating in the former Soviet Union and Asia. Malaria is on the rise, Ebola surfaced in the Congo at the beginning of 2003, and the West Nile Virus is a current concern in North America. Humans — religious and secular — have long manifested a sense of insecurity about the place of humanity in the cosmos and their potential future. Intellectuals and scientists have also produced their fair share of apocalyptic scenarios.⁷ The truth is, we have a lot to be insecure about. In short, one does not have to be religious to conclude that we live in an apocalyptic age. In part, Newton's prediction spoke to these concerns. Behind the joking about 2060, there was an insecurity that made the apocalyptic thought of a great scientist relevant, and perhaps more than relevant. Of course, our jittery nerves about apocalyptic developments owe a lot to media sensationalization. Apocalyptic news, constructed or otherwise, sells newspapers. Although the media loves to ridicule and belittle fundamentalists and religious apocalyptic thinkers, it is worth noting that the world's news services are clearly partly responsible for this by being the main source feeding religious apocalyptic thought.

While some of the media coverage distorted Newton's relationship to prophetic interpretation and made him sound like a date-setter, there were also attempts to erect a *cordon sanitaire* around Newton and separate him from the "fanatical" prophetic interpreters of his age and ours. But this will not do. A scientist from a British-based NEO-watching group wrote to the *Daily Telegraph* complaining that the 22 February 2003 story made Newton sound like an apocalyptic thinker. The correspondent was at pains to present Newton as a rationalist and concluded his letter by writing: "Far from being a prophet of doom, Newton calculatingly established the foundations of the scientific age that turned terrifying comets into predictable objects and wild fear-mongering into dispassionate risk analysis."⁸ Although the correspondent was correct to argue that Newton was not straightforwardly a date-setter, attempts to disassociate Newton from apocalypticism will always end in failure. There is no escaping it: Newton was an apocalyptic

⁷ See Martin Rees, *Our Final Hour: a Scientist's Warning: How Terror, Error, and Environmental Disaster Threaten Humankind's Future in this Century — on Earth and Beyond* (New York, 2003), which appeared shortly after the 2060 story broke. In this book, Sir Martin, Britain's Cambridge-based Astronomer Royal, predicts that humanity has only a 50/50 chance of surviving the twenty-first century — a prophecy much more dire than any Isaac Newton ever made. Also noteworthy are computer science visionary Ray Kurzweil's predictions about the coming "singularity" in 2059, a date a computer science graduate student at Cambridge University reminded me was close to Newton's own prediction (www.kurzweilai.net).

⁸ *Daily Telegraph*, 4 March 2003.

thinker. Not only that, but after a decade of studying Newton's prophetic and millenarian thought, there is no question in my mind that there is a continuum between Newton's more intellectual prophetic project and that of the "enthusiasts" of his own age. Although many in science, the media and the public tend to think of rationality and irrationality as polar opposites, sociologists, historians, and historians of science are of course often much less sanguine about such a construction. As many scholars of the early modern period know well, recent research has emphasized the positive impact of early modern religion, apocalypticism, and even occult thought on the rise of modern science.

The 2060 story raises questions about how academics can and should present their findings to the public. The reality is that the research of an academic who, endlessly qualifying seeks accuracy and precision, will normally be reduced to potentially-misleading sound-bytes by the media. To be fair, it would take a full-length academic paper to fill out all the nuances of this story. And this is precisely the opportunity I now have in this forum. In the second half of this paper, I will attempt to resolve the two main tensions in the *Daily Telegraph* article.

IV. Newton's Interpretation of the Prophetic Time Periods

Newton was not only a passionate theist, but also a firm believer in the Bible and biblical predictive prophecy. Newton's omnipotent and omniscient God knows the end from the beginning and is thus able to reveal the future to humanity. For Newton, "the holy Prophecies" of God's Word contain "histories of things to come."⁹ But these "histories of things to come" are set out in symbolic and metaphorical language that demand exacting interpretative skills. This was a challenge that Newton took up with unflagging enthusiasm for the last fifty-five years of his life. Newton's own prophetic exegesis can be placed firmly within the prophetic school established by the early seventeenth-century Cambridge polymath Joseph Mede.¹⁰ Like Mede, Newton was an historicist, interpreting the symbols of the Apocalypse as representing the broad sweep of history affecting Christians and Jews from the late first century to the second coming of Christ and the Millennium. Newton also followed Mede in his premillenarian eschatology, interpreting the one thousand years of Revelation 20 as referring to a literal Kingdom of the saints on the earth. Finally, like Mede and other historicist commentators, Newton takes the "time, times and half a time," three and a half years or 1260 days of Daniel and Revelation as 1260 years, using the day for a year principle.¹¹ Furthermore, Newton synchronizes all the 1260-day periods mentioned in the prophecies of Daniel and John.¹²

In his writings on prophecy, Newton details the papacy's gradual accumulation of power in the west. First, the ten kingdoms of Europe are converted to the Roman

⁹ Newton, Yahuda MS 1.1a, f. 16r.

¹⁰ See Mede, *Clavis Apocalyptica* (Cambridge, 1632) and the posthumous English translation, Mede, *The Key of Revelation*, transl. Richard More (London, 1643).

¹¹ Newton, *Observations upon the Prophecies of Daniel, and the Apocalypse of St. John* (London, 1733), pp. 113-14.

¹² Newton, Keynes MS 5, f. 21.

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Church. This involved the extension of the Pope's spiritual dominion. The next step involved the Pope securing a temporal dominion. It was at this point that the Pope obtained "a power above all human judicature, [and] he reigned *with a look more stout than his fellows* [Daniel vii. 20], and *times and laws were henceforward given into his hands, for a time times and half a time* [Verses 25]."¹³ In other words, the 1260 years of Daniel begin with the formal acquisition of temporal power by the papacy. For Newton, this time period is represented in the Apocalypse as the 1260 days during which the woman (the Roman Catholic Whore) is nourished in the wilderness (Revelation 12:6), and during which she rides on the back of the Beast (Revelation 17:3), which Newton sees as a symbol of temporal power.¹⁴ The 1260 days in Revelation 11:2-3 likewise refer to the period of the greatest apostasy (the time when the outer court of the Temple is trodden under foot by the Gentiles), which is the same period during which the oppressed and persecuted saints would preach the true Gospel (represented by the period of the prophesying of the Two Witnesses).¹⁵ Eventually, the Beast of the bottomless pit kills the Two Witnesses (Revelation 11:7), but after laying dead for three and a half days, the Two Witnesses are resurrected. For Newton, the resurrection of the Two Witnesses and the recommencement of the preaching is coincident with the fall of Babylon. At the end of the 1260 years, the true Gospel would be preached, a turn of events that would quickly lead into the coming of Christ and the establishment of the Kingdom of God on earth. At this point, Newton believed, Christ "shall reign over the house of Jacob for ever & of his kingdom there shall be no end."¹⁶ Thus for Newton the 1260 years represent the time in which the true, uncorrupt church would be oppressed by the false, corrupt Trinitarian church of the Great Whore.¹⁷ This is the period of deepest apostasy, a time when only a tiny remnant upheld pre-Trinitarian theology. Newton believed he was part of this remnant.

V. Counting the Prophetic Days

For Newton, therefore, the 1260-year period commenced when the Pope gained temporal power and dominion. Determining this commencement date was one of the most important elements to the decipherment of apocalyptic chronology, as the time of the end could be established by adding the 1260-year period to this commencement date. When was this date? In fact, there is no indication that Newton ever settled rigidly on a single date. Instead, he recorded in his prophetic manuscripts a series of commencement dates, beginning in the 1670s with the date

¹³ Newton, *Observations*, pp. 113-14.

¹⁴ *Ibid.*, pp. 282-83.

¹⁵ Newton, Keynes MS 5, ff. 16r, 136r.

¹⁶ Newton, Cambridge University Library MS. Add. 9597, f. 110r. This manuscript forms part of the collection of Newton papers the Cambridge University Library purchased from the Earl of Macclesfield in the summer of 2000.

¹⁷ This chronological scheme is confirmed by an apocalyptic chart Newton sent to John Locke in the 1690s, along with a series of more elaborate charts that form part of the Yahuda collection in Jerusalem (Newton, Bodleian Library, Oxford, MS Locke c. 27, f. 88r. Newton, Yahuda MS 7.2a, ff. 29r-30r).

607 A.D. The general tendency of his studies of apocalyptic chronology was to push the commencement date further and further forward in history, resulting in conclusion dates as late as the twenty-third and twenty-fourth centuries.¹⁸ On a single folio at the end of an early eighteenth-century manuscript treatise on the Apocalypse, Newton considers four commencement dates: 609, 774, 788 and 841 A.D.¹⁹ The first date provides conclusion dates for the 1260, 1290 and 1335 years of 1869, 1899 and 1944.²⁰ Newton appears to have been attracted to the 609 date because of the decree of Phocas in or around this year that granted Pope Boniface IV the right to "set up the Images of the Virgin Mary & all the Martyrs in the place of the Images of Cybele & all the heathen Gods in the Pantheon at Rome & in their honour instituted the annual feast of all saints."²¹ Image worship was a major litmus test of apostasy. The commencement date 774 relates to the acquisition of temporal power by the Pope. Newton writes that it was in 774 that "the Pope gained his temporal Estate dominion by the grant of Charles the great [Charlemagne] & thereby became a king & like y^e rest of y^e horns."²² The commencement date 774 provides a conclusion date of 2034 A.D., arguably more dramatic than the one publicized in early 2003. In his posthumously-published *Observations*, which is based on prophetic manuscripts written in the early eighteenth-century, Newton also points to the Pope acquiring his dominion "in the latter half of the eighth century."²³ Curiously, although Newton was one of the most accomplished mathematicians ever to have lived, in none of these examples does he write down the conclusion dates. As a child could have carried out the simple arithmetic it would have taken to produce these dates, something other than lack of mathematical ability must be at work here.

This brings us to the 2060 manuscript. When I was asked to select manuscripts from the Yahuda collection in Jerusalem the day before the documentary filming in the Jewish National University Library, I chose several that I thought might have televisual appeal. These included a theological manuscript with a chemical stain, the elaborate apocalyptic charts in Yahuda MS 7 and a small letter slip on which Newton had written both mathematical and prophetic calculations. I suggested to the producer that the ephemeral nature of this small manuscript, along with the still-visible remnants of the red wax seal and the curious juxtaposition of mathematical and prophetic calculations might make a striking example for viewers. In particular, I was hoping that something could be said about the insight into the wide-ranging nature of Newton's thought based on the presence on this manuscript of both mathematics and prophecy. I also thought viewers might find it striking to see in Newton's hand a date from our own century. In the event, it was this final feature

¹⁸ Richard S. Westfall, "Newton's theological manuscripts," Z. Bechler (ed.), *Contemporary Newtonian research*, (Dordrecht, 1982), pp. 132, 135-36, 139; idem, *Never at Rest: a Biography of Isaac Newton* (Cambridge, 1980), p. 325.

¹⁹ Newton, Keynes MS 5, f. 138v.

²⁰ The 1290- and 1335-day (year) time periods are given in Daniel 12:11-12.

²¹ Newton, Keynes MS 5, f. 117r; Newton, Yahuda MS 7.31, f. 5r (in this manuscript Newton gives the date of the decree as 607 A.D.).

²² Newton, Keynes MS 5, f. 138v.

²³ Newton. *Observations*. v. 113.

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that the documentary producer, director and production team found most compelling. This is the manuscript that bears the now-famous 2060 date.

Here are the prophetic calculations of this manuscript, with lacunae inserted within square brackets:

- Prop. 1. The 2300 prophetick days did not commence before the rise of the little horn of the He Goat.
2. Those day [sic] did not commence a[f]ter the destruction of Jerusalem & ye Temple by the Romans A.[D.] 70.
3. The time times & half a time did not commence before the year 800 in wch the Popes supremacy commenced
4. They did not commence after the re[ig]ne of Gregory the 7th. 1084
5. The 1290 days did not commence b[e]fore the year 842.
6. They did not commence after the reigne of Pope Greg. 7th. 1084
7. The diffence [sic] between the 1290 & 1335 days are a parts of the seven weeks.

Therefore the 2300 years do not end before ye year 2132 nor after 2370.
The time times & half time do n[o]t end before 2060 nor after [2344]
The 1290 days do not begin [this should read: end] before 2090 nor after 1374 [sic; Newton probably means 2374]²⁴

The first observation that can be made about these jottings is that they are just that: ephemeral jottings on the back of a letter slip. Although the calculations are perfectly consistent with Newton's prophetic hermeneutics, and while he no doubt took these calculations seriously, their presence as jottings on a letter slip, complete with errors, demonstrates that these lines were private musings. Clearly, this ephemeral text was never intended to be broadcast to the world. To add to this, the date 2060 is not given here as a secure date, but rather as one-half of a set of temporal parameters.

At the same time, other indications suggest that the date 2060 was an important one for Newton. First of all, this document dates from the final years of Newton's life. Since the letter is addressed to Sir Isaac Newton, a *terminus a quo* of 1705 can be assumed for the writing of the annotations. The shaky handwriting suggests a date closer to the final decade of Newton's life.²⁵ Also, as already mentioned, the significance of the 2060 date is seen partly in the fact that Newton only rarely wrote down conclusion dates. Moreover, this is not the only place Newton records the 2060 date. On another folio apparently from the same period appears the following calculations and statements:

So then the time times & half a time are 42 months or 1260 days or three years & an half, reckoning twelve months to a yeare & 30 days to a month as was done in the Calendar of the primitive year. And the days of short

²⁴ Yahuda MS 7.30, f. 8r.

²⁵ Newton died in March 1727.

lived Beasts being put for the years of lived [*sic* for “long lived”] kingdoms, the period of 1260 days, if dated from the complete conquest of the three kings A.C. 800, will end A.C. 2060. It may end later, but I see no reason for its ending sooner. This I mention not to assert when the time of the end shall be, but to put a stop to the rash conjectures of fancifull men who are frequently predicting the time of the end, & by doing so bring the sacred propheties into discredit as often as their predictions fail. Christ comes as a thief in the night, & it is not for us to know the times & seasons wch God hath put into his own breast.²⁶

Thus, rather than confirming that Newton was a date-setter, which was something many of the 2003 media stories implied, this other passage mentioning the 2060 date demonstrates that Newton was most unhappy with date-setting. On this rare occasion when he writes down a conclusion date, he is careful to qualify it in two ways: first, the end may come later than 2060 and, second, this late date was also meant to quash the “rash conjectures” of those in his own time who were setting dates for his own age. This is not to say that Newton did not take the 2060 date or prophecy in general seriously, for he most definitely did. This passage also helps demonstrate why Newton only seldom committed a completion date to paper.

Finally, the last distortion of the media depiction of Newton’s prediction for 2060 A.D. relates to the mistaken assumption that Newton was forecasting the destruction of this world in that year. Although the original *Daily Telegraph* article contained a preemptive rebuttal of this conclusion, as already mentioned, a great many media accounts missed the positive message in Newton’s beliefs regarding the end of this age. The date 2060 did not represent for Newton the annihilation of the globe and its inhabitants, but a dramatic transition to a millennium of peace. In other words: the end of the secular world and the beginning of the Kingdom of God. Summarizing and paraphrasing Revelation 21 and 22, Newton outlines some of the events subsequent to the date 2060 (or thereabouts) in one of the apocalyptic charts now housed in Jerusalem:

A new heaven & new earth. New Jerusalem comes down from heaven prepared as a Bride adorned for her husband. The marriage supper. God dwells wth men wipes away all tears from their eyes, gives them of y^e fountain of living water & creates all ~~thin~~ things new saying, It is done. The glory & felicity of the New Jerusalem is represented by a building of Gold & Gemms enlightened by the glory of God & y^e Lamb & watered by y^e river of Paradise on y^e banks of w^{ch} grows the tree of life. Into this city the kings of the earth do bring their glory & that of the nations & the saints reign for ever & ever.²⁷

Although for Newton the apocalypse would be accompanied by plagues and war, it would be the storm before the calm.

²⁶ Newton, Yahuda MS 7.3g, f. 13v; cf. Newton, Yahuda MS 7.3g, f. 13r. It is worth noting that Charlemagne was crowned by the Pope on Christmas Day 800 A.D., an event that heralded the beginning of the Holy Roman Empire.

²⁷ Yahuda MS 7.2a, f. 31r.

VI. Conclusion: Newton and 2060 A.D.

Although there are examples from Newton's period of prophetic exegetes who put the time of the end off until the year 2000,²⁸ the trend was to place the end within or not long after one's lifetime. Thus, one of the most striking aspects of Newton's prophetic chronology is the lateness of his commencement dates. Joseph Mede concluded that the 1260 years began in 476 with the fall of the Roman Empire and thus would come to a conclusion in 1736 (mere decades after his death, had he lived a full life). William Lloyd, the Bishop of Worcester, placed the end within his own lifetime, announcing in person to Queen Anne in 1712 that the Roman Church would fall and that papal city would be destroyed by a flame of fire from heaven in the year 1716 — and that these dramatic events would be succeeded by the reign of Christ on earth for the thousand years.²⁹ Newton's own prophetic disciple William Whiston set 1736 as the end of the 1260 years and the year 1766 as the beginning of the Millennium.³⁰ As Newton knew only too well, Whiston made a career of broadcasting these dates to the learned world. Whiston's openness in this regard is likely one of the reasons Newton eventually broke with his quondam disciple.

Newton's apocalyptic chronology and late date for the fall of Roman Babylon also reveal his theological radicalism. As the Gospel was not to be preached until around the beginning of the twenty-first century, the Protestant Reformation is reduced almost to an irrelevancy in the history of the Church. In the date 2060 Newton's heresy and apocalyptic thought come together.

One wonders what Newton would have thought about his prediction for 2060 spreading like wildfire around the world. Would he have been dismayed that what was for him a private musing was made public knowledge, to be alternatively belittled and wondered at? Would Newton, fiercely opposed as he was to those who publicly set dates for the time of the end, have been deeply chagrined that for many he would come to be known as a prophetic date-setter, precisely the sort of person he loathed? Or would he have been satisfied that now, as we are moving towards the age in which the true Gospel is to be preached, it is time to preach openly? We will have to wait until 2060 to ask him.

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²⁸ Robert Fleming, *The First Resurrection: or, a Dissertation, Wherein the Prior and Special Resurrection and Reward of the Most Eminent Christian Witnesses, During the Rage of Paganism and Antichristianism, is Considered, in Two Grand Inquiries* (London, 1708), pp. 108, 121, 162; Sir John Floyer, *An Exposition of the Revelations* (London, 1719), p. 89.

²⁹ Tindal A. Hart, *William Lloyd 1627-1717: Bishop, Politician, Author and Prophet* (London, 1952), pp. 177-78.

³⁰ Whiston, *An Essay on the Revelation of St. John, so far as Concerns the Past and Present Times*, second edn (London, 1744), pp. 106, 232-34.